Kirby Morgan®
Surface Supplied MOD-1
A2.1
Annual Inspection/Overhaul/Maintenance Checklist

THIS INSPECTION AND MAINTENANCE SHOULD BE PERFORMED **AT LEAST ANNUALLY** AND AS DICTATED BY CONDITION REVEALED DURING DAILY/MONTHLY INSPECTION. MONTHLY INSPECTIONS DETERMINE NECESSITY FOR OVERHAUL WITH MORE ACCURACY THAN SIMPLY PLACING A NUMBER OF HOURS OF USE.

This checklist is intended to aid persons performing routine overhauls of the KMDSI MOD-1 mask with the Surface Supplied Pod. **The checklist should be used in conjunction with the latest version of the KMDSI Modular Operations and Maintenance Manual for the Surface Supplied Pod.** This checklist is primarily intended to document the maintenance as it is completed and to help guide the technician during overhauls. Specific detailed procedures for each section of this checklist can be found in the Modular Operations and maintenance manuals. This checklist, when completed should be retained in the equipment maintenance files.

⚠ WARNING

These are recommended minimum checks when using Kirby Morgan Helmets or Masks. Additional checks may be required as dictated by the conditions and tasks being performed. Failure to perform in-water checks may result in serious injury or death.

NOTE Remove any and all NON KMDSI factory stickers from the Mask for proper inspection.

NOTE KMDSI strongly recommends that all repairs be performed by trained personnel.

NOTE Masks being used in extreme environments will require more frequent inspection.

NOTE **When performing the A2.1 as a scheduled overhaul, all O-rings must be replaced.** When using the A2.1 as an "inspection" only, in-between annual overhauls, O-rings and exhaust valves may be reused if inspection reveals the soft goods are serviceable.

Date: _____

Pod Serial Number _____

Associated Equipment Serial #(s): _____

Technician *(print name)*: _____

1. Hood Assembly

CHECK THE FOLLOWING:

Procedures	Initials
1) . Remove Mask Strap and inspect for signs of tearing, deterioration, and/or damage. Ensure all five legs of the Mask Strap and Strap Keepers are present. Replace if necessary.	
2) Remove the Earphones from their pockets in the Hood. Remove the Hood from the Mask. Perform a visual inspection where the earphone wire goes into the earphone and confirm a solid connection.	
3) Visually inspect the Hood, if present, for signs of damage, and/or deterioration. Ensure hood frame bracket is not cracked or broken and that the mating surface is not damaged. Verify hood frame brackets are secure by confirming tightness of screws and lock nuts. Replace if necessary.	

2. Mask Assembly

CHECK THE FOLLOWING:

Procedures	Initials
1) Visually inspect the Mask exterior and interior for loose and/or missing fasteners and obvious signs of damage; including cracks, gouges, and/or depressions.	
2) Remove the Nose Pinch Assembly by removing the tie wrap on the outside. Clean and inspect the Nose Pinch Assembly. Reinstall onto mask.	

3. Pod

CHECK THE FOLLOWING:

Procedures	Initials
1) Remove Regulator Adjustment Knob and Exhaust Cover.	
2) Remove Pod from mask. Guidance Modular O & M Manual.	
3) Inspect Pod gasket for damage. Replace if necessary.	
4) Perform a complete communications assembly audio check.	
5) Remove Microphone Assembly from the Oral Cup. Remove microphone from shroud. Inspect and repair/replace as necessary. Guidance Modular O & M Manual.	
6) Remove Oral Cup from Pod. Clean and inspect replace if damaged, torn or ripped. Guidance.	
7) Remove Weight and Communications module.	

4. Side Block

The Side Block needs to be physically removed from the Pod every year. All soft goods need to be changed in accordance with the Operations and Maintenance manual.

CHECK THE FOLLOWING:

Procedures	Initials
1) Remove Jumper and bailout hose.	
2) Separate one way valve, adapter and Big bore hose.	

Procedures	Initials
3) Remove, disassemble, and overhaul the One-Way Valve. Guidance One Way module.	
4) Remove, discard, and replace Umbilical Adapter on the one way valve.	
5) Remove and replace both O-rings used on the Big Bore Hose.	
6) Remove the Side Block from the pod.	
7) Remove Side Block Mount Frame.	
8) Separate Steady Flow Supply Tube from frame by removing retaining O-ring and remove remaining O-ring from tube.  NOTE O-ring may have remained in the mount frame when the tube was removed. Keep an eye out for this.	
9) Remove Muffler Screen.	
10) Clean and inspect screen and tube. Replace as necessary.	
11) Reinstall Muffler Screen into tube and tube into frame with O-rings.	
12) Remove, disassemble, and overhaul the EGS Valve. Guidance Modular O & M Manual. Ensure the similar looking O-rings stay together. EGS O-rings are NOT interchangeable with the Steady Flow O-rings.  NOTE Visually inspect parts for corrosion. Look for discoloration, pitting and micro cracks. These conditions could result in a part failure. Corrosion pitting may have deep cavities that are not visible. If there's any doubt about the integrity of the part it should be replaced.	

Procedures	Initials
13) Remove, disassemble, and overhaul the Steady Flow Valve. Guidance Modular O & M Manual. Ensure the similar looking O-rings stay together. Stead Flow O-rings are NOT interchangeable with the EGS O-rings  NOTE Visually inspect parts for corrosion. Look for discoloration, pitting and micro cracks. These conditions could result in a part failure. Corrosion pitting may have deep cavities that are not visible. If there's any doubt about the integrity of the part it should be replaced.	

5. Demand Regulator

DIVER/TENDER – CHECK THE FOLLOWING:

Procedures	Initials
1) Remove regulator purge assembly (includes retainer ring, washers, spring and Diaphragm).	
2) Remove and disassemble the Main Tube Assembly (Regulator). Visually inspect the interior of the Regulator Pod Housing for damage and/or contamination. Clean as necessary.	
3) After the Main Tube Assembly has been disassembled, clean and inspect all parts. Replace **ALL** O-rings and the inlet valve seat.	
4) Reassemble the Main Tube Assembly (Do NOT install). Guidance modular O & M Manual.	
5) Remove Chamber Cover. Clean and inspect all parts. Replace cover gasket.	
6) Remove and replace Purge Valve and Exhaust Valve located in the Regulator Pod Housing. Check Valve Seats adhesion to Pod Housing. Special attention to the glued joints. Any indication of poor bonding will require a replacement Pod housing.	

Procedures	Initials
7) Reinstall Chamber Cover with Cover Gasket installed.	
8) Remove and replace both Port and Starboard Exhaust Valves and O-rings. Ensure Valve Seat Inserts are free of damage, replace if necessary.	
9) Remove Connector Body. Replace O-rings, reinstall into pod.	
10) Reinstall and secure Communications Junction Housing and Weight.	
11) Install boot onto microphone element and ensure microphone element to wire leads are tight.	
12) Install Microphone assembly into Oral Cup.	
13) Install Oral Cup into Regulator Pod Assembly.	
14) Plug Microphone Wire Jumpers into Connector Body.	
15) Perform communications check.	
16) Reinstall Main Tube assembly into Regulator Pod.	
17) Reinstall Side Block Mount Frame with Muffler.	
18) Reinstall Banjo Tube	

Procedures	Initials
19) Reinstall Side Block.  NOTE Ensure O-ring is in place.	
20) Reinstall end cap.	
21) Reinstall Diaphragm, Washers and Retainer Ring.	
22) Check the Regulator for proper operation and fine tune the adjustment if necessary. Guidance Modular O & M Manual.	
23) Fit Pod Gasket to Regulator Pod Assembly and install Pod to mask.  NOTE Lock Nut 530-145 MUST BE REPLACED.	
24) Reinstall Hood Assembly.	
25) Reinstall Mask Strap and Strap keepers.	
26) Reinstall Regulator Exhaust Cover and Regulator Adjustment Knob.	

6. Emergency Gas Supply (EGS)

NOTE

The Emergency Gas System consists of a good quality First Stage Regulator equipped with a submersible pressure gauge, an Over Pressure Bleed/Relief Valve, and an Emergency Gas Supply Hose that connects to the Emergency Valve on the Mask Side Block.

DIVER/TENDER – CHECK THE FOLLOWING:

Procedures	Initials
1) Check the hydrostatic date and last visual inspection record ("VIP") of the cylinder. Ensure date(s) are within the specified range. The VIP is done at least annually and the hydrostatic test is done at least every five years.	
2) **Check the maintenance record of the EGS components** to ensure the First Stage Regulator's maintenance has been performed in accordance with the manufacturer's recommendations.	
3) Check all Hoses for signs of blisters, cover slippage, cuts, and/or abrasions and corrosion. KMDSI recommends that all LP hoses be pressure tested to 1.5 times the maximum hose pressure rating. Replace any Hose(s) that show signs of leakage/damage. If a Quick Connect EGS hose is being used, inspect quick connect and fittings for signs of wear/damage. Replace O-rings as necessary.	
4) If a submersible pressure gauge is used, ensure it has been compared to a gauge of known accuracy. Inspect the hose and fittings for signs of damage and corrosion.	
5) Overhaul and test the First Stage Bleed/Relief Valve. Guidance as per "Appendix 4:Bleed/Relief Valve Cleaning, Inspection, and Overhaul Procedures".	
6) Log the lifting pressure _____ psig. NOTE An adjustable First Stage Regulator and a Gas Cylinder with a minimum of 500 psig (35 bar) available are required for this step. NOTE The Bleed/Relief Valve should be adjusted to start relieve between 180–200 psig (12–14 bar) when tested.	

Procedures	Initials
8) Check the over-bottom setting of the First Stage Regulator to ensure it is within the manufacturer's specified pressure range. For KMDSI Helmets and Masks, the minimum over-bottom for the emergency supply is 120 psig (8 bar) and the maximum 145 psig (10 bar). Log the intermediate pressure.	
9) Perform a leak check of all EGS components and fittings using soapy water in a pressurized condition. Repair/replace items as necessary.	
10) Inspect the Harness Assembly for signs of wear and/or damage. Repair/replace as necessary. Document any inspection/maintenance on the Maintenance Log (Appendix 3).	

Recorded in service records for the Surface Supplied Pod and EGS System (maintenance log books)?
☐ Yes ☐ No

Recorded service in Surface Supplied Pod maintenance log book? ☐ Yes ☐ No

I_____ hereby certify that I have performed the work required in the A2.1 and that **I AM** a certified KMDSI / Dive Lab technician.

Print Name: _____

Signature: _____ Date: _____

ID #: _____ Date of Certification: _____

I_____ hereby certify that I have performed the work required in the A2.1 and **I AM NOT** a certified KMDSI / Dive Lab technician.

Technician/Owner Print Name: _____

Signature: _____ Date: _____

Comments: _____

KMDSI strongly recommends that a certified KMDSI Repair Technician make all repairs and that only genuine KMDSI repair and replacement parts be used. Owners of KMDSI products that elect to do their own repairs and inspections should only do so if they possess the knowledge and experience. All inspections, maintenance, and repairs should be completed using the appropriate KMDSI user guide and Operations and Maintenance Manual(s). Persons performing repairs should retain all replacement component receipts for additional proof of maintenance history. Should any questions on procedures, components, or repairs arise, please contact Kirby Morgan Dive Systems, Inc., by telephone at (805) 928-7772 or via e-mail at kmdsi@kirbymorgan.com, or contact Dive Lab, Inc., by telephone at (850) 235-2715 or via e-mail at divelab@divelab.com.

The Maintenance Log, Appendix 3, found in the Misc. Appendices checklists on the Kirby Morgan website, may be used as a template to create blank pages to record all the maintenance performed.

